



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Greg Denton
TDEC-WPC
6th Floor, L & C Tower Annex
401 Church Street
Nashville, TN 37243-1534

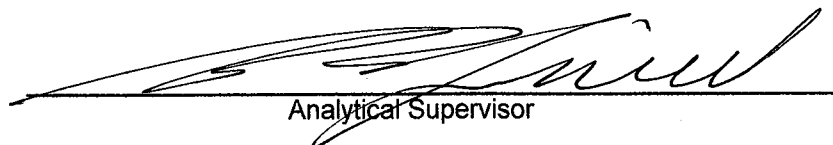
Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002281
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00002281001
Project Name:
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 04/14/2009 10:50
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 47 uMHO
Temperature: 13.46
Dissolved Oxygen: 10.94 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	11	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	U	mg/L	10	10	A Peebles	4/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281002
Project Name:
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 04/14/2009 11:46
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.15 pH Units
Chlorine, residual:
Conductivity: 51 uMHO
Temperature: 12.25
Dissolved Oxygen: 11.30 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	14	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	11	mg/L	10	10	A Peeples	4/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281003
Project Name:
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 04/14/2009 12:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.15 pH Units
Chlorine, residual:
Conductivity: 49 uMHO
Temperature: 11.84
Dissolved Oxygen: 11.28 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	14	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	17	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	13	mg/L	10	10	A Peebles	4/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281004
Project Name:
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 04/14/2009 12:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.11 pH Units
Chlorine, residual:
Conductivity: 57 uMHO
Temperature: 12.74
Dissolved Oxygen: 11.18 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	16	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	15	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	10	mg/L	10	10	A Peebles	4/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281005
Project Name:
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4D
Station No.: EMORY000.1RO
Date/Time Collected: 04/14/2009 12:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.11 pH Units
Chlorine, residual:
Conductivity: 57 uMHO
Temperature: 12.74
Dissolved Oxygen: 11.18 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	15	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	16	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	11	mg/L	10	10	A Peebles	4/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281006
Project Name:
Sample Description: Clinch River mile 2.3 near Hwy 70 bridge
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 04/14/2009 12:28
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.40 pH Units
Chlorine, residual:
Conductivity: 120 uMHO
Temperature: 13.66
Dissolved Oxygen: 11.00 mg/L
Other:
Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	70	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	60	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	13	mg/L	10	10	A Peebles	4/17/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281007

Project Name:

Sample Description: Clinch River mile 4.5 near Sugar Grove Valley R

Sampler Project Name: TVA Ash Spill

Project Site No.: 6

Station No.: CLINC004.5RO

Date/Time Collected: 04/14/2009 12:39

Sampler's Name: Geoff Klein

County: ROANE - 73

Sample Matrix: Water

EFO: Knoxville

Sampling Agency: TDEC-WPC

Billing Code: 327.34-20

Send Report To: TDEC-WPC

Agency Invoiced: TDEC-WPC

Priority Date:

Date/Time Received: 04/14/2009 15:15

Received By: E McCrary

Field Determinations

pH: 7.77 pH Units

Chlorine, residual:

Conductivity: 211 uMHO

Temperature: 13.41

Dissolved Oxygen: 10.90 mg/L

Other:

Flow: CFS

TEST: Alkalinity, Total		METHOD: EPA 310.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Alkalinity	100	mg/L	3.8	10	M Chen	4/21/2009

TEST: Hardness, Calcium		METHOD: SM 3500-Ca D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium hardness	83	mg/L	0.7	1	M Chen	4/20/2009

TEST: Residue, Settleable		METHOD: SM 2540F				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Settleable Residue	U	ml/L	0.10	0.10	P Leathers	4/15/2009

TEST: Residue, Suspended		METHOD: SM 2540D				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Suspended Solids	17	mg/L	10	10	A Peeples	4/17/2009

J - Estimated value between MDL and MQL

MDL - Method Detection Limit

MQL - Method Quantitation Limit

U - Undetected



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Michael Atchley
TDEC-WPC
Knoxville FO
3711 Middlebrook Pike
Knoxville, TN 37921

Lab ID: K00002281
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Water Pollution Control

Billing Code: 327.34-20

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

Analytical Supervisor

Lab-Sample Number: K00002281001
Project Name:
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 04/14/2009 10:50
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 47 uMHO
Temperature: 13.46
Dissolved Oxygen: 10.94 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	200	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	140	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	0.72J	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	26	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	4.1J	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.32J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	3.8	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.29J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	30	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	2.1	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	0.04J	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	7.1	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number: K00002281001
Project Name:
Sample Description: Emory River mile 12.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 1
Station No.: EMORY012.1RO
Date/Time Collected: 04/14/2009 10:50
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.58 pH Units
Chlorine, residual:
Conductivity: 47 uMHO
Temperature: 13.46
Dissolved Oxygen: 10.94 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.049J	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281002
Project Name:
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 04/14/2009 11:46
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.15 pH Units
Chlorine, residual:
Conductivity: 51 uMHO
Temperature: 12.25
Dissolved Oxygen: 11.30 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	500	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	320	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	31	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	4.5J	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.44J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	1.2	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.63J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	47	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	0.03J	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	5.1	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number: K00002281002
Project Name:
Sample Description: Emory River mile 2.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 2
Station No.: EMORY002.1RO
Date/Time Collected: 04/14/2009 11:46
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.15 pH Units
Chlorine, residual:
Conductivity: 51 uMHO
Temperature: 12.25
Dissolved Oxygen: 11.30 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number: K00002281003
Project Name:
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 04/14/2009 12:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.15 pH Units
Chlorine, residual:
Conductivity: 49 uMHO
Temperature: 11.84
Dissolved Oxygen: 11.28 mg/L
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	420	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	310	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	31	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	3.3J	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.41J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	4.5	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.78J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	44	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	11	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number: K00002281003
Project Name:
Sample Description: Emory River mile 1.7
Sampler Project Name: TVA Ash Spill
Project Site No.: 3
Station No.: EMORY001.7RO
Date/Time Collected: 04/14/2009 12:00
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.15 pH Units
Chlorine, residual:
Conductivity: 49 uMHO
Temperature: 11.84
Dissolved Oxygen: 11.28 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.069J	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281004
Project Name:
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 04/14/2009 12:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.11 pH Units
Chlorine, residual:
Conductivity: 57 uMHO
Temperature: 12.74
Dissolved Oxygen: 11.18 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Iron	370	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Aluminum	240	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	29	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	2.4J	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.38J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	1.0	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.41J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	47	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	1.2	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	3.7J	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number: K00002281004
Project Name:
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4
Station No.: EMORY000.1RO
Date/Time Collected: 04/14/2009 12:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.11 pH Units
Chlorine, residual:
Conductivity: 57 uMHO
Temperature: 12.74
Dissolved Oxygen: 11.18 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281005
Project Name:
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4D
Station No.: EMORY000.1RO
Date/Time Collected: 04/14/2009 12:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.11 pH Units
Chlorine, residual:
Conductivity: 57 uMHO
Temperature: 12.74
Dissolved Oxygen: 11.18 mg/L
Other:
Flow: CFS

TEST: Digestion Metals			METHOD: EPA 200.2			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP			METHOD: EPA 200.7			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	440	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS			METHOD: EPA 200.8			
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	250	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	30	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.40J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	3.5	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.85J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	47	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	10	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number: K00002281005
Project Name:
Sample Description: Emory River mile 0.1
Sampler Project Name: TVA Ash Spill
Project Site No.: 4D
Station No.: EMORY000.1RO
Date/Time Collected: 04/14/2009 12:12
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.11 pH Units
Chlorine, residual:
Conductivity: 57 uMHO
Temperature: 12.74
Dissolved Oxygen: 11.18 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.063J	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: K00002281006
Project Name:
Sample Description: Clinch River mile 2.3 near Hwy 70 bridge
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 04/14/2009 12:28
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.40 pH Units
Chlorine, residual:
Conductivity: 120 uMHO
Temperature: 13.66
Dissolved Oxygen: 11.00 mg/L
Other:
Flow: CFS

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	380	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	240	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	37	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.37J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	3.3	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.66J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	44	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	1.4	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	4.9J	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number: K00002281006
Project Name:
Sample Description: Clinch River mile 2.3 near Hwy 70 bridge
Sampler Project Name: TVA Ash Spill
Project Site No.: 5
Station No.: CLINC002.3RO
Date/Time Collected: 04/14/2009 12:28
Sampler's Name: Geoff Klein
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-WPC
Billing Code: 327.34-20
Send Report To: TDEC-WPC
Agency Invoiced: TDEC-WPC
Priority Date:
Date/Time Received: 04/14/2009 15:15
Received By: E McCrary

Field Determinations
pH: 7.40 pH Units
Chlorine, residual:
Conductivity: 120 uMHO
Temperature: 13.66
Dissolved Oxygen: 11.00 mg/L
Other:
Flow: CFS

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.073J	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected

Lab-Sample Number:	K00002281007	Field Determinations	
Project Name:		pH:	7.77 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	211 uMHO
Project Site No.:	6	Temperature:	13.41
Station No.:	CLINC004.5RO	Dissolved Oxygen:	10.90 mg/L
Date/Time Collected:	04/14/2009 12:39	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	04/14/2009 15:15		
Received By:	E McCrary		

TEST: Digestion Metals		METHOD: EPA 200.2				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	04/17/2009				A Wilson	4/17/2009

TEST: ICP		METHOD: EPA 200.7				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Iron	570	µg/L	2.9	10	A Bass	4/22/2009

TEST: ICP-MS		METHOD: EPA 200.8				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Aluminum	310	µg/L	6.4	10	M Pattanayek	4/20/2009
Antimony	U	µg/L	0.33	1	M Pattanayek	4/17/2009
Arsenic	U	µg/L	0.93	5	M Pattanayek	4/17/2009
Barium	40	µg/L	2.5	5	M Pattanayek	4/17/2009
Beryllium	U	µg/L	0.11	1	M Pattanayek	4/17/2009
Cadmium	U	µg/L	0.41	1	M Pattanayek	4/17/2009
Chromium	U	µg/L	2.0	5	M Pattanayek	4/17/2009
Cobalt	0.35J	µg/L	0.04	1	M Pattanayek	4/17/2009
Copper	2.3	µg/L	0.38	1	M Pattanayek	4/17/2009
Lead	0.75J	µg/L	0.10	1	M Pattanayek	4/17/2009
Manganese	44	µg/L	0.42	1	M Pattanayek	4/17/2009
Nickel	1.6	µg/L	0.25	1	M Pattanayek	4/17/2009
Selenium	U	µg/L	1.3	5	M Pattanayek	4/17/2009
Silver	U	µg/L	0.03	0.25	M Pattanayek	4/17/2009
Thallium	U	µg/L	0.03	1	M Pattanayek	4/17/2009
Vanadium	U	µg/L	3.4	5	M Pattanayek	4/17/2009
Zinc	4.9J	µg/L	1.9	5	M Pattanayek	4/17/2009

Lab-Sample Number:	K00002281007	Field Determinations	
Project Name:		pH:	7.77 pH Units
Sample Description:	Clinch River mile 4.5 near Sugar Grove Valley R	Chlorine, residual:	
Sampler Project Name:	TVA Ash Spill	Conductivity:	211 uMHO
Project Site No.:	6	Temperature:	13.41
Station No.:	CLINC004.5RO	Dissolved Oxygen:	10.90 mg/L
Date/Time Collected:	04/14/2009 12:39	Other:	
Sampler's Name:	Geoff Klein	Flow:	CFS
County:	ROANE - 73		
Sample Matrix:	Water		
EFO:	Knoxville		
Sampling Agency:	TDEC-WPC		
Billing Code:	327.34-20		
Send Report To:	TDEC-WPC		
Agency Invoiced:	TDEC-WPC		
Priority Date:			
Date/Time Received:	04/14/2009 15:15		
Received By:	E McCrary		

TEST: Mercury		METHOD: EPA 245.1				
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	0.079J	µg/L	0.025	0.20	A Jeffries	4/22/2009

J - Estimated value between MDL and MQL
 MDL - Method Detection Limit
 MQL - Method Quantitation Limit
 U - Undetected